

REMARKS

The applicant respectfully request reconsideration in view of the amendments and the following remarks.

Claims 22-35 and 41-45 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Polyplastics Co. (JP-11-091040, herein referred as JP' 040). The applicant respectfully traverses this rejection.

Enclosed is a computer-translation of the Polyplastics document.

Pending independent claim 22 covers layered compositions encompassing a polyacetal molding layer and a polyolefin molding layer, wherein the adhesion-promotion is reached with a layer substantially composed of a copolymer or a mixture of these which derives from alpha-olefins and ethylenically unsaturated carboxylic acid esters and optionally further ethylenically unsaturated carboxylic acid derivatives. So the superior adhesion between a polyacetal layer and a polyolefin layer is reached with alpha-olefin copolymers comprising necessarily carboxylic acid ester groups.

Additionally, in paragraph 0052 of the published specification U.S. Application (US 2006/ 0040120 A1), it is explained that the adhesion takes place through the described adhesion layer bearing non-polar constituents (alpha-olefin monomers) and polar groups (carboxylic acid ester groups and optionally carbon acid derivative groups), so that the adhesion layer can adhere to the polar polyacetal (POM) layer as well as to the non-polar polyolefin layer. That means that the adhesion between the polyacetal layer and the polyolefin layer is essentially increased because of an adhesion between the layers caused by polar-polar interaction respectively interactions between non-polar moieties.

Polyplastics discloses a composition of

- a polyacetal layer which necessarily contains an alkylene glycol polymer with primary or secondary amino groups,

- an unmodified olefin resin, and
- an adhesive layer containing a modified olefin resin (see the abstract of Polyplastics)

The polyacetal layer and the unmodified olefin resin layer are laminated with the adhesive layer containing said modified olefin resin (see abstract of the Polyplastics document). According to paragraph 0007 of the computer-translation of the Polyplastics document the polyacetal resin is labelled with (A), comprising the polyacetal as such (A1) and the amino modified polyethyleneglycol polymer (A2). The unmodified olefin resin is labelled with (B), comprising a polyolefine (B1) (for the definition of (B1) see also paragraphs 0016 and 0017). The olefin resin (B1) may bear acrylic ester groups or vinyl ester groups. Furthermore a glue line (C) can be present between the layers (A) and (B). One of these layers, particularly (C) or (B) must bear the olefin resin (B2).

According to paragraph 0018 of the Polyplastics document (B2) is the modified olefin resin of the adhesive layer. (B2) is modified with reactant groups which are able to react with the primary or secondary amino groups of the alkylenglycol polymer (A2) present in the polyacetal layer. As suitable reactive groups are mentioned hydroxyl groups, carboxyl groups, acid anhydride groups, sulfonic groups, epoxy groups and glycidyl groups are mentioned in paragraph 0018. These groups have a reactivity to the amino modified alkylenglycole polymer of the polyacetal layer. As the applicant has informed the undersigned, due to the reaction between the amino groups and the reactive groups of (B2) the lamination between the polyacetal layer (A) and the polyolefin layer (B) is improved. Thus, the lamination between the polyacetal resin and the unmodified polyolefin resin comprising (B1) is reached with the described modified olefin resin (B2) by chemical reaction with the amino-modified alkylenglycol polymer (A2).

The carbon acid ester group, which is an essential feature of the adhesive layer according to pending claim 22 of the applicant's application, does not react with amino groups. As stated above, carbon acid esters groups are not mentioned as reactive groups in the Polyplastics document. Furthermore, the lamination between the polyacetal layer and the polyolefin layer take place by a chemical reaction between the reactive groups of the polyolefin layer (B2) and

the amino groups of the polyalkylenglycol (A2). In contrast thereto the adhesion according to the applicant's invention is a result of polar-polar interactions between the adhesive layer and the polyacetal layer and non-polar interactions between the adhesive layer and the polyolefin layer.

The preparation of a stable layered composition between a polyacetal layer and a polyolefin layer without a chemical cross-linking of a polyacetal layer modified with an amino-modified alkylenglycol polymer, with a polyolefin layer is not mentioned in the Polyplastics document. There is no hint given in Polyplastics that such a composition can be provided with an adhesive layer of an alpha-olefin copolymer with carboxylic acid ester groups. For the above reasons this rejection should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

A three month extension fee has been paid. Applicant believes no additional fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 05587-00381-US from which the undersigned is authorized to draw.

Dated: December 9, 2008

Respectfully submitted,

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ENCLOSURE: COMPUTER-TRANSLATION OF THE POLYPLASTICS DOCUMENT